REMARKS

Claims 1-7, 9-15, 17-25, and 27-28 of the subject application are currently pending and have been rejected by the Examiner.

In particular, the Examiner has rejected claims 1-6, 9-14, 17-24, and 27-28 under 35 U.S.C. § 103(a) as being unpatentable over Beal (US 6,101,178) in view of Reed et al (US 6,275,707. In this regard, the Office Action states:

> Regarding claims 1, 9, 11, 17, 19, 27, Beal discloses a pseudolite-augmented GPS for locating wireless telephones comprising: a transceiver to receive a first set of codes from multiple separate transmitters, the transceiver to generate a second code (see fig. 1, elements 101s, 102, co.7, lines 8-30 and its description), and a correlator on the transceiver to uses the first set of codes and the second codes to find a distance between the transceiver and the transmitter, the correlator using the distance to determine a position of the transceiver relative to the transmitter (see fig.1, elements 101s, 102, co.7, lines 8-30, col. 11, lines 10-59 and its description), except for via a short-range wireless Bluetooth communications standard. However, Reed discloses method and apparatus for location determination from a first transceiver to a second transceiver to be used in a GPS system (figs. 1-2) in which a short range wireless communication standard as Bluetooth and IEEE standard 802.11 are used (col.2, lines 35-37, 57-60, col.3, lines1-5). Since Beal and Reed do teach a short range transmission for location determination, therefore, it would have been obvious to one skilled in the art at the time the invention was made to modified the Beal's pseudolite transmitter with the short range wireless communication standard transceiver of Reed to determine location of objects inside the building where the GPS signal being usable to access in order to provide an accuracy location.
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> (Page 3, Office Action mailed July 23, 2004)

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable

expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

In column 1, lines 45-60, Beal describes the so-called "line-of-site" restriction associated with GPS location detection. In particular Beal states:

> GPS can provide highly accurate position estimates. However, the GPS signal frequency is approximately 1.5 GHz and its power level at the receiving antenna is –160 dBW. The high frequency and low received power of the GPS signals restrict the use of GPS to locations where the receiver's antenna has a clear, line-of-sight view of the requisite number of satellites. The requisite number of satellites is normally four, but can be less if some form of aiding is used. For example, if altitude aiding is used, it may be possible to obtain a GPS solution with three satellites. The line-of-sight restriction degrades GPS performance in buildings, in vehicles, under foliage, in areas with steep terrain where the horizon is blocked by mountains or high buildings, or other places where the GPS antenna does not have an unobstructed view of the sky.
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> (Beal, paragraph 1, lines 45-60)

Further, Beal describes that the line-of-sight restriction may be mitigated by adding pseudolites on the ground to augment the space-based GPS satellite constellation (see col. 1, lines 63-65).

In column 2, lines 5-10, Beal states that:

> "A pseudolite can broadcast one or more of the GPS satellite frequencies, or it can broadcast on a separate frequency. If a pseudolite broadcasts on a GPS frequency, it can mask the GPS broadcasts, particularly when the receiver is in close proximity to the pseudolite. Broadcasting on a separate frequency adds cost to the receiver because the receiver

must have the frequency bandwidth to receive and process both the GPS and pseudolite signals."

(Beal, paragraph 2, lines 63-65)

In column 2, lines 44-53, Beal states that:

"When multiple pseudolites broadcast on a common frequency, they suffer from what is known as the "near-far problem." A pseudolite that is too near a receiver can block reception of signals from distant pseudolites. This occurs when the received power level from the near-field pseudolite is much higher than the received power level from the far-field pseudolite, thereby masking the weaker signal. When pseudolites broadcast at the same frequency as the space-based GPS constellation, they can, when near enough to the receiver, mask the satellite signals."

(Beal, paragraph 2, lines 44-53)

Beal describes techniques for solving the near-far problem (see col. 4, lines 45-65); the near-far problem would not exist if the pseudolites were to transmit on a frequency other than a GPS satellite frequency. Solving the near-far problem by using pseudolites that broadcast on a frequency that is different from the GPS satellite frequency, teaches away from the techniques disclosed in Beal since Beal's techniques are restricted to solving the near-far problem created by the pseudolites using the same frequency as the GPS satellites in order to avoid increasing the costs of the receiver as mentioned in the Beal, col. 2, lines 5-12.

Since, Beal teaches away from using the pseudolites to broadcast on a frequency other than a GPS frequency, Beal teaches away from using a short-range wireless Bluetooth communications standard, as recited in claim 1.

Moreover, the combination of Beal and Reed does not teach or suggest all limitations of claim 1. For example, Reed describes a method for assigning location estimates from a first transceiver to a second transceiver. In the method of Reed, the first transceiver makes the location estimate using a variety of methods, including the use of GPS receivers, differentially corrected GPS receivers, obtaining a location from a nearby device which has a preprogrammed location, etc. (see col. 4, lines 60-65). Once the first transceiver makes the location estimate, the first transmitter then sends the location estimate to the second transceiver using peer-to-peer and short-range communications such as Bluetooth, the IEEE standard 802.11, etc. (see col. 2, lines 55-60). However, it is important to note that the first transceiver merely transmits the location estimate to the second transceiver using the peer-to-peer and short-range communications protocols. The peer-to-peer and short-range communications protocols are not actually used in the determination of the location. Thus, the peer-to-peer and short-range communications protocols are not used to augment the location determination. As noted above, Beal teaches augmenting location determination using GPS satellites through the use of pseudolites. As such, Beal does not teach or suggest a combination with Reed, and Reed does not teach or suggest a combination with Beal.

Moreover, such a combination of Beal and Reed will still fail to teach or suggest all limitations of claim 1. For example, the combination of Beal and Reed fails to teach "a transceiver to receive a first set of codes from multiple separate transmitters via a short-range wireless Bluetooth communication standard", as recited in claim 1. This is because the first set of codes are used by the correlator to find a distance between a transceiver and the transmitter, as recited in claim 1, whereas Reed fails to teach or

suggest that the peer-to-peer and short-range communications protocols may actually be used to transmit a code to be used in location determination.

Based on the foregoing, it is respectfully submitted that claims 1, 11, and 19 are not rendered obvious by the combination of Beal and Reed. Moreover, the remaining claims are dependent on one of claims 1, 11, and 19, and are thus not rendered obvious by the combination of Beal and Reed.

It is respectfully submitted that in view of the remarks set forth herein, all rejections have been overcome. All pending claims are now in condition for allowance, which is earnestly solicited.

If the Examiner determines that prompt allowance of these claims could be facilitated by telephone conference, the Examiner is invited to contact Vani Moodley at (408) 720-8300.

Authorization is hereby given to charge our Deposit Account No. 02-2666 for any charges that may be due. Furthermore, if an extension is required, then Applicant hereby requests such an extension.

Respectfully submitted,
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